UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte MARK NIXON,
TERRENCE L. BLEVINS, AND WILHELM K. WOJSZNIS

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Appeal 2006-3180
Application 09/510,053
Technology Center 2100

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Decided: February 20, 2007

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Before KENNETH W. HAIRSTON, JOSEPH L. DIXON, and
HOWARD B. BLANKENSHIP, *Administrative Patent Judges.*

BLANKENSHIP, *Administrative Patent Judge.*

DECISION ON APPEAL

This appeal involves claims 1-21, the only claims pending in this application. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 134.

INTRODUCTION

The claims are directed to an apparatus and method for simulating operation of a distributed process control system. Claim 1 is illustrative:

1. An apparatus for use with a distributed process control system having a user workstation remotely located from a distributed controller that controls one or more field devices using control modules, the apparatus comprising:

a computer having a memory and a processing unit;

a configuration application stored in the memory of the computer which, when executed on the user workstation or the computer, creates one or more control modules for execution by the distributed controller and a further module for execution by a device separated from the distributed controller, wherein at least one of the control modules is created to communicate with the further module within the device separated from the distributed controller to perform a control activity; and

a controller application stored in the memory of the computer, which may be executed on the processing unit of the computer, wherein the controller application, when executed on the distributed controller, implements the one of the control modules during operation of the distributed process control system to communicate with the further module to perform the control activity;

wherein the configuration application, when executed on the computer, further creates the one of the control modules for use by the distributed controller within the distributed process control system and wherein the controller application when executed on the computer causes execution of the one of the control modules and the further module within the computer to simulate the operation of the one of the control modules including simulating communicating with the further module to thereby simulate operation of the distributed process control system.

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The Examiner relies on the following prior art references to show unpatentability:

Santoline	WO 9738362	Oct. 16, 1997
Bowling	WO 9745778	Dec. 4, 1997
Leibold	US 5,818,736	Oct. 6, 1998
Brown '281	US 6,192,281 B1	Feb. 20, 2001
Brown '859	US 6,377,859 B1	Apr. 23, 2002

The rejections as presented by the Examiner are as follows:

1. Claims 1, 6-8, 10-12, 17, and 18 are rejected under 35 U.S.C. § 103(a) as unpatentable over Leibold and Brown '859.

2. Claims 2, 3, 13, and 14 are rejected under 35 U.S.C. § 103(a) as unpatentable over Leibold, Brown '859, and Appellants' admitted prior art.

3. Claims 4, 5, 15, and 16 are rejected under 35 U.S.C § 103(a) as unpatentable over Leibold, Brown '859, and Bowling.

4. Claim 9 is rejected under 35 U.S.C § 103(a) as unpatentable over Leibold, Brown '859, Appellants' admitted prior art, and Santoline.

5. Claims 19-21 are rejected under 35 U.S.C § 103(a) as unpatentable over Leibold, Brown '859, and Brown '281.

OPINION

The § 103 rejection of claim 1 over Leibold and Brown '859 is set forth at pages 3 to 7 of the Answer. The rejection asserts there are three separate deficiencies in Leibold as applied against the claim, with Brown '859 deemed to contain the teachings that are lacking in Leibold. We agree with Appellants, however, that deficiencies exist in Leibold that are not remedied by any combination with Brown '859.

Brown '859, as Appellants argue and the Examiner seems to acknowledge, is directed to an actual distributed process control system. Brown '859 does not concern simulating the operation of the distributed process control system.

Leibold is directed, as the patent title states, to a system and method for simulating logic flow through a logic block pattern of a real time process control system. According to the reference, a typical logic point includes many configurable subunits, or logic blocks, that are used to provide the logic required to implement a control strategy for a particular process plant or facility. Leibold col. 2, ll. 13-23. Leibold teaches a system that contains a real logic block pattern, but otherwise simulates input data, output data, and system responses. Col. 3, ll. 1-8. Process controller 105 (Fig. 1) may be programmable to function as a logic point, comprising a plurality of associated logic blocks. Col. 6, ll. 41-56.

Figure 2 of Leibold depicts a flow diagram for simulating signal flow through a logic block pattern. The logic block pattern may represent a single logic block, a plurality of logic blocks, or a logic point. A user begins the simulation by defining a database of input data associated with simulated sensors for use in a process facility. Leibold col. 8, ll. 37-53. In the exemplary embodiment, a computer contains a logic block pattern to be tested, but otherwise simulates the input data, output data, and system responses. Col. 9, ll. 31-41.

Leibold teaches that actual process control systems 10 (Fig. 1) may include a multitude of process controllers 105 associated with the network. Col. 7, ll. 5-10. The simulation is limited, however, as we have noted, to

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logic flow in a single process controller, with simulated input and output data.

We thus agree with Appellants that Leibold does not teach, contrary to the finding at page 4 of the Answer, a configuration application that creates one or more control modules for execution by the distributed controller and a further module for execution by a device separated from the distributed controller in the identified portions of the reference. Nor does Leibold teach a controller application that when executed on the computer causes execution of the one of the control modules and the further module within the computer to simulate the operation of the one of the control modules to thereby simulate operation of the distributed process control system, notwithstanding the finding at page 6 of the Answer.

The rejection of independent claim 12 (Answer 10) suffers from the same deficiencies. As the references applied against the dependent claims do not remedy the deficiencies in the rejection applied against base claim 1 and 12, we do not sustain the § 103 rejection of claims 1-18.

The rejection of the remaining independent claim, claim 19, is puzzling. The rejection relies on Leibold, but turns to Brown '281, and further to "Brown et al.," which must refer to Brown '859, in view of pages 3 and 15 of the Answer. The portion of "Brown et al." upon which the rejection relies (col. 2, ll. 1-25) is identical, or substantially identical, in Brown '859 and Brown '281. It is thus unknown why the rejection relies on a third reference for subject matter that is described in the second.

In any event, we agree with Appellants for substantially the reasons expressed in the briefs that the rejection fails to demonstrate prima facie

obviousness of the subject matter as a whole of instant claim 19. As claims 20 and 21 incorporate all the limitations of claim 19, we do not sustain the § 103 rejection of claims 19-20.

CONCLUSION

In summary, we do not sustain the rejection of claims 1-21 under 35 U.S.C. § 103(a).

REVERSED

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